

REMARKS

The present claim amendments are responsive to the Examiner's concerns noted in the Office Action.

Summary of the Response

No Claim has been amended. Claims 3 and 13 have been previously canceled. Claims 1, 2, 4-12 and 14-26 remain pending in this application. Reexamination and reconsideration of the present application as amended are respectfully requested.

Claim Rejections under 35 USC 103

Claims 1, 2, 4-12 and 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US Patent No. 6,175,759) in view of Haaland et al. (US Patent No. 5,596,992). This rejection is respectfully traversed.

The Examiner acknowledged that Chan fails to disclose an optical fiber to deliver and detect light used to illuminate the area of interest. The Examiner looked to Haaland for such teaching. Applicant respectfully submits that there is no motivation to one of ordinary skill in the art to combine the teachings of Chan and Haaland, for at least the reasons discussed below.

a. Combination of Chan and Haaland Does Not Meet Claimed Invention

The fact that Chan does not teach optical fiber delivery of light to illuminate the area of interest is not its only deficiency. Even if Chan and Haaland can somehow be combined, the combination would not meet the claims. Chan does not refer to detection of presence of internal bleeding by employing the step of illuminating and transmitting through a thin layer of tissue

which is specifically required to be the prostinx fornix of vaginal wall or rectal wall between the superior and inferior valves, as required by independent claims 1 and 11. Haaland does not make up for the deficiencies of Chan. Haaland likewise does not specifically refer to such step. Even if one were to refer to Haaland for guidance for internal cavity detection, Haaland simply does not contain an enabling disclosure of the method of detecting through the specific tissue areas recited in claims 1 and 11. Haaland does not recognize the areas beyond those tissues where leaked blood may be trapped, much less any enabling disclosure of detecting the presence of blood trapped beyond such tissues. Haaland does not indicate how to undertake detection at those tissue locations, and how its detection instrument may be modified or tuned to implement such detection method.

In fact, in the Office Action, at page 2, the Examiner expressly acknowledged that Haaland does not explicitly disclose detecting the posterior fornix of the vaginal wall and the rectal wall area. Such admission by the Examiner clearly demonstrates that the combination of Chan and Haaland, even if somehow feasible and permissible, would not provide prima facie support to render the claimed invention obviousness. The Examiner went on to comment that despite such deficiency, "the probe of Haaland is used in the vaginal and rectal areas and when combined with the method of Chan it would be obvious to one of skill in the art to image through these specific areas due to". Apparently, the Examiner found the combination of Chan and Haaland to be missing an explicit teaching, but despite such deficiency of the combination, he nonetheless concluded that the deficiency is obviousness. Such conclusion is improper without demonstrating the missing teaching from the combination. The Examiner is required to cite an additional reference for such missing teaching, if such additional reference exists in the first place. Accordingly, Applicant respectfully requests the Examiner to specifically point to specific

sections in Chan and/or Haaland, or any additional references where the recited tissue is referenced for conducting detection through such tissue.

Further, Applicant submits that Haaland's general reference to vaginal and rectal areas, absent any specifics, would not render obvious all possible types of detection at all possible tissue areas of the vaginal and rectal areas for all purposes, and specifically the detection through the tissues at the prostinix fornix of virginal wall or rectal wall between the superior and inferior valves required by the pending claims. In examining the present application, the Examiner should keep in mind the context of the present invention. The claimed invention is directed to a diagnostic method for detecting specifically internal bleeding by detecting the presence of leaked blood at a specific location of the body (claim 1), and a device that is specifically configured to carry out such process (claim 11) (the device must be configured to be able to distinguish within the detected signal, between leaked blood accumulated behind the specific tissue areas, as compared to other parts.) As such, by nature of a claim involving a specific process, it would not be proper for the Examiner to simply refer to a reference such as Haaland that teaches nothing more than a possible detection instrument for conducting certain internal cavity detection, in an attempt to find teaching of the specific method defined by the claims of the present invention. To draw an analogy, in the context of claiming a specific novel surgical method for a specific surgical process undertaken at a specific location of the body, the fact that surgical equipments used for such novel process (e.g., surgical knifes) are old in the art, that would not anticipate all possible surgical processes involving specific surgical locations on the human body using such surgical equipment.

Given the foregoing, even if Chan and Haaland can somehow be combined, such combination would not result in an enabling disclosure of detection of internal bleeding

comprising detection through tissues that are located specifically at the prostinix fornix of vaginal wall or rectal wall between the superior and inferior valves, as required by the independent claims in the present application. Even if the references can somehow be combined, it would be necessary to make modifications, not taught in the prior art, in order to combine the documents to obtain the claimed invention.

b. Not Obvious to Combine Chan and Haaland

Applicant respectfully submits that Chan and Haaland should not have been combined in the first place to render the claimed invention obvious, since such combination would not have been obvious to a person skilled in the art. Chan is directed to non-invasive multispectral imaging system that illuminates and detects from external of a person's body (specifically from outside the skin of a person's body, without intrusion into any internal cavity areas of the person, such as rectal and vaginal cavities). Haaland on the other hand is directed to a multivariate classification apparatus that can be used to probe internal of a person's body (specifically inside the cavities in a person's body, such as the cervical areas). Given the diverse purposes of Chan and Haaland, it is clear that neither Chan nor Haaland contain any suggestion (express or implied) that they be combined by modifying Chan with Haaland, much less that they be combined in any specific manner to obtain the claimed invention, and certainly not in the manner suggested only by the Examiner (which can only be made possible with the benefit of hindsight reconstruction given the disclosure of the present invention).

Chan is complete and functional in itself, so there would be no reason, and in fact no reason has been stated in Chan, to modify its specific teaching of external, through the skin

detection with the internal cavity probe detection of Haaland. Chan does not contain any expressed or implied suggestion that its external detection can and should be modified to internal cavity detection. In fact, Fig. 15 in Chan illustrates the test set-up to detection of internal bleeding with fluorescence (see also col. 2, lines 23 and 24 in Description of The Drawings). Chan recognizes that it is important to conduct non-invasive detection outside the human body, and in the context of Chan, that means without intrusion into any internal cavity of the body. Accordingly, Chan meets its objectives by configuring its detection technique for non-invasive through the skin detection. There is no indication anywhere in Chan that internal cavity detection can and should be adequately substituted for its non-invasive external through the skin detection. Chan does not include any hint or suggestion to refer to another reference for guidance on substituting or modifying its external through the skin detection scheme. There is therefore no teaching or suggestion (expressed or implied), taking into account only knowledge which was with the level of ordinary skill at the time the invention was made, if and how Chan could be modified by any reference on internal cavity detection, much less Haaland, while maintaining the non-invasive external through the skin detection that Chan proposes. Such modification is only possible with impermissible hindsight reconstructions, made possible only by the disclosure of the present invention. Chan therefore effectively teaches away expressly, or at least by implication, from internal cavity detection suggested only by the Examiner by hindsight reconstruction after gleaned the disclosure of the present invention.

Until the creation of the present invention, none of the prior art detection process has been successful to detect internal bleeding in a quick, simple, cost effective manner. The results achieved by the invention are new, unexpected, superior, critical, and unsuggested by any prior art. The present invention provides an enabling solution to a long felt, long-existing, but

unresolved need, achieving advantages beyond what the prior art has to offer, and expects to attain commercial success. The accomplishments of the inventors of the present invention involve no small steps. (However, even if the steps taken by the inventors is deemed to be small, the invention is classified in a crowded art; therefore even if a "small" step forward should be regarded as significant.) If the present invention were in fact obvious, because of its advantages, those skilled in the art surely would have implemented it by now. That is, the fact that those skilled in the art have not implemented the invention, despite its great advantages, indicates that the combination suggested in the Office Action would not have been obvious.

In summary, Chan and Haaland take mutually exclusive paths and reach different solutions to different problems that the respective references address. Chan requires non-invasive external through the skin detection. Haaland on the other hand requires internal cavity detection. Consequently, they effectively teach away from each other (expressly or by implication). Therefore it would not be logical to combine them.

Accordingly, one skill in the art would not have looked to Haaland to find the solutions that could overcome the drawbacks of the prior art, which solutions are found only by the inventors of the present invention. In any attempt to achieve the present invention, it would be necessary to make modifications, not taught or rendered obvious by the prior art, in order to combine the references in the manner suggested only by the Examiner. Applicant respectfully requests the Examiner to reference specific sections in the cited documents to support any conclusion that the present invention as defined by all the independent claims are rendered obvious by Chan and Haaland.

All the independent claims, and all claims dependent therefrom, are not rendered obvious by Chan and Haaland, and the rejection should be withdrawn.

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CONCLUSION

In view of all the foregoing, Applicants respectfully submit that the claims pending in this application are patentable over the references of record and are in condition for allowance. Such action at an early date is earnestly solicited. The Examiner is invited to call the undersigned representative to discuss any outstanding issues that may not have been adequately addressed in this response.

Respectfully submitted,

Dated: April 30, 2007

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